

# SAF-RC-001

## Industrial Hygiene Sampling

### FINAL DATA

**NO DISTRIBUTION REQUIRED**

**COMMENTS:**

SDG 06I-0373-01 SAF-RC-001

Rad only    ☒ Chem only    Rad & Chem

☒ Complete    Partial

**300 Area 334 Bldg Site**

**RECEIVED**  
MAR 29 2006  
**EDMC**



## Cover Page

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Report Identification Number: 06I-0373-01  
Subcontract Number: 0000X-BO-G0058-B-Mod#4  
Name of Industrial Hygienist: Denise A. Pitts / Henry W. Ruby  
Laboratory Identification Number: DCHM  
SAF#: RC-001 / R33400J452  
Payroll#: 73513



### Sample Information

Sample Date	Customer Sample Number	Laboratory Sample Number	Method	Analytical Batch Identification	Sample Matrix
26 Jan 2006	J10YJ9	06I02970	NMAM 7300M	G061000T	G WIPE
26 Jan 2006	J10YK0	06I02971	NMAM 7300M	G061000T	G WIPE
26 Jan 2006	J10YK3	06I02972	NMAM 7300M	G061000T	G WIPE
26 Jan 2006	J10YK1	06I02973	NMAM 7300M	G061000T	G WIPE

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Name: Lisa M. Reid  
Title: Chemist  
Date: February 02, 2006



## Case Narrative Page

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Report Identification Number: 06I-0373-01  
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**General Set Information:** There are 4 samples in set 06I-0373-01. The samples were analyzed for cadmium, lead and beryllium on Ghost Wipe. Problems were encountered with the receipt of these samples and contact with the CTR was required. The COC had only Be marked but in the upper box labeled "Possible Sample Hazard / Remarks" Be, Pb, Cd all were listed. After discussions with the CTR the samples were analyzed for all three.

**Method Summary:** Samples were transferred to 50 ml centrifuge tubes and digested in the presence of 5 mL of nitric acid and 5 mL of ASTM Type II water. Samples were digested in a hot block set at 110°C for 60 minutes. Samples were then diluted to a 25 mL volume with ASTM Type II Water. Samples were shaken and delivered for ICP analysis.

**Sample Preparation:** All samples were prepared in accordance with DCL SOP "IH-AN-021" and NIOSH method NMAM 7300 modified for hot block digestion.

**Holding Times:** The holding times were met for both sample preparation and analysis.

**Instrument Calibration:** Instrument calibration was performed in accordance with NIOSH method NMAM 7300.

**Initial and Continuing Calibration Verification Analysis:** Beryllium, cadmium and lead recoveries in all Initial Calibration Verification (ICV) and Continuing Calibration Verification (CCV) samples are within the quality control limits of +/- 10%.

**Initial and Continuing Calibration Blank Analysis:** No beryllium results were found in the Initial Calibration Blank (ICB) or Continuing Calibration Blanks (CCB) at levels above the Contract Required Detection Limits (CRDL) of 0.02 ug/sample. No cadmium results were found in the Initial Calibration Blank (ICB) or Continuing Calibration Blanks (CCB) at levels above the Contract Required Detection Limits (CRDL) of 0.2 ug/sample. No lead results were found in the Initial Calibration Blank (ICB) or Continuing Calibration Blanks (CCB) at levels above the Contract Required Detection Limits (CRDL) of 3. ug/sample.

**Method Blank Analysis:** No beryllium, cadmium or lead was found in any of the media blank samples above the Contract Required Detection Limit (CRDL).

**Dilution(s):** None were required.

**Laboratory Control Sample and Duplicate Analysis:** One Laboratory Control Sample (LCS) and one Laboratory Control Sample Duplicate (LCSD) were prepared and analyzed with the sample batch. The LCS results were within the control limits of +/- 20%. The Relative Percent Difference (RPD) between the LCS and the LCSD were within the control limit of 20%.

**Replicate Analysis:** One sample in this batch was replicated. The RPD between the sample and the replicate was within the control limit of 20%. If the result of the sample or replicate is below the CRDL, replicate analysis is negligible.

**Flagging Codes:** None

**Nonconformance/Corrective Action Report (NC/CAR):** N/A

**Sample Calculation:** The final results are calculated by the following equation:  
Final result for aqueous samples ( $\mu\text{g}/\text{sample}$ ) = (A) x (B) x (C)

Where:

A = Analyte concentration from instrument determination ( $\mu\text{g}/\text{L}$ )

B = Concentration factor from sample preparation

=  $\frac{\text{Final Volume of Digestate (L)}}{\text{Sample}}$

C = Dilution performed at time of analysis

Example Calculation:  $(1 \mu\text{g}/\text{L}) \times (0.025 \text{ L}/\text{sample}) \times (1) = 0.025 \mu\text{g}/\text{sample}$

**Miscellaneous Comments:** None



## Report Page

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Report Identification Number: 06I-0373-01  
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Laboratory Identification Number: DCHM  
SAF#: RC-001 / R33400J452  
Payroll#: 73513

Customer Sample Number	Laboratory Sample Number	Date Analyzed	Beryllium µg/sample		Cadmium µg/sample		Lead µg/sample	
J10YJ9	06I02970	01 Feb 2006	0.026		<0.2	U	<3.	U
J10YK0	06I02971	01 Feb 2006	0.037		<0.2	U	<3.	U
J10YK3	06I02972	01 Feb 2006	<0.02	U	<0.2	U	3.4	
J10YK1	06I02973	01 Feb 2006	<0.02	U	<0.2	U	20.	
Limit of Detection (LOD)			0.02		0.2		3.	
Required Detection Limit (RDL)								

U - Parameter not detected above LOD.

J - Parameter between LOD and RDL.



## QC Summary Page

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Laboratory Identification Number: DCHM  
SAF: RC-001 / R33400J452  
Payroll#: 73513

Batch ID: G061000T

QC Sample ID	QC Type	Analyte	Units	Result	Parent Result	Target	Percent Rec.	Relative Percent Diff.
BL-240748-1	MB	Beryllium	µg/sample	ND	NA	NA	NA	NA
BL-240748-1	MB	Cadmium	µg/sample	ND	NA	NA	NA	NA
BL-240748-1	MB	Lead	µg/sample	ND	NA	NA	NA	NA
QC-240748-1	LCS	Beryllium	µg/sample	11.7	NA	10.0	117.	NA
QC-240748-1	LCS	Cadmium	µg/sample	32.6	NA	30.0	109.	NA
QC-240748-1	LCS	Lead	µg/sample	106.	NA	100.	106.	NA
QD-240748-1	LCSD	Beryllium	µg/sample	11.7	11.7	10.0	117.	0.0629
QD-240748-1	LCSD	Cadmium	µg/sample	33.0	32.6	30.0	110.	1.09
QD-240748-1	LCSD	Lead	µg/sample	106.	106.	100.	106.	0.140

MB - Method Blank

LCS - Laboratory Control Sample

LCSD - Laboratory Control Sample Duplicate

MS - Matrix Spike

MSD - Matrix Spike Duplicate

LD - Laboratory Duplicate

NA - Not Applicable

ND - Parameter not detected above LOD

$LCS, LCSD \text{ Percent Rec.} = (\text{Result} / \text{Target}) * 100.0$

$MS, MSD \text{ Percent Rec.} = ((\text{Result} - \text{Parent}) / \text{Target}) * 100.0$

$LCS, LCSD \text{ Relative Percent Diff.} = (|LCS - LCSD| / ((LCS + LCSD)/2.0)) * 100.$

$MS, MSD \text{ Relative Percent Diff.} = (|MS - MSD| / ((MS + MSD)/2.0)) * 100.$

$LD \text{ Relative Percent Diff.} = (|Parent - LD| / ((Parent + LD)/2.0)) * 100$

[illegible]

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## CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

[illegible]

Enter on line below the first Sample Number from Page One:

J10YJ9

### CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

SIGN / PRINT NAMES / USE MILITARY TIME

Relinquished By/Stored: <i>[Signature]</i> DATE / TIME: 1-26-06 1530	Received By/Stored: 3746 Building, Rm 16, locked cabinet DATE / TIME: 1-26-06 1530
Relinquished By/Stored: 3746 locked cabinet Rm # 16 DATE / TIME: 01-31-06 / 1430	Received By/Stored: RZ Steffler RZ Steffler DATE / TIME: 1-31-06 / 1430
Relinquished By/Stored: Guthrie Mallon Goldie Mallon DATE / TIME: WCH 1-31-06 / 1515	Received By/Stored: Fed Ex DATE / TIME:
Relinquished By/Stored: RZ Steffler RZ Steffler DATE / TIME:	Received By/Stored: DATE / TIME:
Relinquished By/Stored: DATE / TIME:	Received By/Stored: DATE / TIME:
Relinquished By/Stored: DATE / TIME:	Received By/Stored: DATE / TIME:
Relinquished By/Stored: DATE / TIME:	Received By/Stored: DATE / TIME:
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Relinquished By/Stored: DATE / TIME:	Received By/Stored: DATE / TIME:
LABORATORY SECTION	Received By Title DATE / TIME

**FIELD SAMPLE COPY**

**COPY**

REVIEWED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
PRINT/SIGN NAME